

**To:** Busch, Stephen (DEQ)[BUSCHS@michigan.gov]  
**Cc:** Benzie, Richard (DEQ)[BENZIER@michigan.gov]; Cook, Pat (DEQ)[COOKP@michigan.gov]; Prysby, Mike (DEQ)[PRYSBYM@michigan.gov]; Wurfel, Brad (DEQ)[WurfelB@michigan.gov]; Hyde, Tinka[hyde.tinka@epa.gov]  
**From:** Yanna Lambrinidou  
**Sent:** Mon 9/28/2015 4:30:24 PM  
**Subject:** Re: question about optimal WQP ranges for Flint's water

Dear Mr. Busch,

I appreciate your response.

Would you be able to send me a copy of the modified consecutive system approach to lead and copper monitoring that EPA approved?

I am sorry I cannot route my question through the NDWAC or my WG. I am not a NDWAC member, and my WG disbanded when our final report was completed back in August. I apologize if I have caused any confusion. The questions I am posing come solely from me because I am in the process of writing a dissenting opinion about the NDWAC LCR WG recommendations that is due to EPA in a couple of weeks. One of the main reasons I am writing this opinion is because of concerns I have about the LCR's CCT requirement. Your experience with and implementation of the LCR in Flint is extremely helpful to me in deepening my understanding about the LCR's CCT requirement and will undoubtedly allow me to write a more informed discussion.

I thank you in advance for your help on this matter and your support of ongoing efforts to assess the LCR carefully and thoroughly.

Kindly,

Yanna Lambrinidou

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**From:** "Busch, Stephen (DEQ)" <BUSCHS@michigan.gov>  
**To:** Yanna Lambrinidou <pnalternatives@yahoo.com>  
**Cc:** "Benzie, Richard (DEQ)" <BENZIER@michigan.gov>; "Cook, Pat (DEQ)" <COOKP@michigan.gov>; "Prysby, Mike (DEQ)" <PRYSBYM@michigan.gov>; "Wurfel, Brad (DEQ)" <WurfelB@michigan.gov>; "hyde.tinka@epa.gov" <hyde.tinka@epa.gov>  
**Sent:** Friday, September 25, 2015 8:26 AM  
**Subject:** RE: question about optimal WQP ranges for Flint's water

Dr. Lambrinidou,

I'm sorry for the delay in my response. As some of your questions relate more to statewide program implementation I have requested assistance with the response from staff within our central program office. However, these staff were attending and participating in an offsite (American Water Works Association Conference Michigan Section) conference last week.

Michigan has implemented an EPA approved modified consecutive system approach to lead and copper monitoring where a wholesale water supply sells water to other community water systems. In addition, while water quality parameter (WQP) monitoring occurs at both the water treatment plant and in the combined distribution system, a WQP range is only required to be established at the water treatment plant tap after the system has demonstrated optimized corrosion control treatment (OCCT).

Thus when the City of Flint was a customer of the Detroit Water and Sewerage Department (DWSD), the City of Flint participated in WQP monitoring of its distribution system, but ranges were established only for the OCCT at DWSD treatment plants. The attached letter from our Department established the minimum levels for pH and phosphate dosage in 2000.

As the City of Flint water treatment plant has not yet installed such treatment or been given the designation of OCCT these plant tap values have not been established.

However, the City of Flint WTP has continued to maintain the minimum pH value requirement previously established for DWSD

As noted in your Working Group Report to the NDWAC, "Corrosion Control Treatment (CCT) involves the addition of chemicals (e.g. orthophosphates or silicate) to create a barrier between the pipes and the drinking water, or to modify drinking water chemistry (such as pH and hardness) to inhibit the potential for corrosion."

Should you consider the Flint WTP softening process to be OCCT, then the City already continues to comply with the OCCT requirements as the City of Flint has never had 10% or more of compliance tap samples exceed the 15 ppb action level. Even prior to DWSD's established OCCT the City of Flint lead compliance monitoring has never exceeded the 15 ppb action level.

If you have additional questions we would appreciate having them routed through the NDWAC and your Working Group. Thanks.

Stephen Busch, P.E.  
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**From:** Yanna Lambrinidou [mailto:[pnalternatives@yahoo.com](mailto:pnalternatives@yahoo.com)]

**Sent:** Wednesday, September 16, 2015 7:22 PM

**To:** Busch, Stephen (DEQ); Wurfel, Brad (DEQ)

**Subject:** Re: question about optimal WQP ranges for Flint's water

Dear Mr. Busch,

Thank you for your quick response. I appreciate the information at, I am sure, a very busy time for you and MDEQ.

Could you please help me understand the following?

When you say that all previous optimal water quality parameter ranges would have been established for the Detroit water utility (not for the City of Flint), do you mean that MDEQ never set optimal water quality parameter ranges *specifically* for Flint before Flint's switch to Flint River water?

It is my impression, please correct me if I'm wrong, that under the LCR, all large systems -- whether they are consecutive or not -- must have optimal water quality parameter ranges designated by states *specifically for them* (at the time when these systems are deemed to have optimized their treatment). Is there language in the LCR I am missing that allows a utility not to have optimal quality parameter ranges established specifically for it?

My second question is this: If the City of Flint had no optimal water quality parameter ranges established specifically for it in the past, how did it achieve LCR compliance? Isn't it the case that utility-specific optimal water quality parameter ranges (and maintenance of these ranges) are required for all large systems to avoid an LCR violation?

I would appreciate your assistance on this matter, as it will shed light on an issue that seems to be very important for EPA's assessment of and upcoming revisions to the LCR.

Kindly,

Yanna Lambrinidou

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**From:** "Busch, Stephen (DEQ)" <[BUSCHS@michigan.gov](mailto:BUSCHS@michigan.gov)>

**To:** Yanna Lambrinidou <[pnalternatives@yahoo.com](mailto:pnalternatives@yahoo.com)>; "Wurfel, Brad (DEQ)" <[WurfelB@michigan.gov](mailto:WurfelB@michigan.gov)>

**Sent:** Monday, September 14, 2015 11:05 AM

**Subject:** RE: question about optimal WQP ranges for Flint's water

Dr. Lambrinidou,

All previous water quality parameter ranges would have been established for the City of Flint's wholesale finished water supplier, the Detroit Water and Sewerage Department, not the City of Flint itself.

As the City of Flint has not yet established optimized corrosion control treatment, the MDEQ is not yet at the point of regulatory requirements where the range of water quality parameters would be set.

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**From:** Yanna Lambrinidou [<mailto:pnalternatives@yahoo.com>]  
**Sent:** Thursday, September 10, 2015 11:11 AM  
**To:** Wurfel, Brad (DEQ); Busch, Stephen (DEQ)  
**Subject:** question about optimal WQP ranges for Flint's water

Good morning Mr. Wurfel and Mr. Busch,

As a member of the EPA National Drinking Water Advisory Council (NDWAC) Lead and Copper Rule (LCR) workgroup that just completed its recommendations to EPA about the agency's upcoming revisions to the LCR, I am watching with great interest and concern the developments in Flint in relation to lead. I am looking for information on the optimal water quality parameter (WQP) ranges that MDEQ has set for Flint's water. Are those posted online? If so, could you send me the link? If not, could you let me know what they are?

Thank you kindly,

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